

white hair, but vertex with fuscous hair; mesothorax elevated and gibbous in front, dull anteriorly, polished on disc, with strong scattered punctures; scutellum polished, very sparsely punctured in middle; area of metathorax semilunar, sharply defined, with numerous longitudinal rugæ. Wings slightly dusky, stigma piceous, nervures sepia; second submarginal cell variable in width; hind tibiæ and tarsi with shining white hair on inner side. Abdomen rather short, polished, with the punctures excessively minute, and no hair-bands or patches on dorsal surface; on the ventral side there is a broad band of white tomentum across the middle of the abdomen.

♀.—Length fully 8 mm.

More robust, the broad face wholly black; mesothorax strongly and closely punctured on disc, but scutellum with two large polished impunctate areas; middle and hind tibiæ and tarsi brownish.

Launceston, Tasmania, Sept. 19, 1916 (*F. M. Littler*), two males. The female was taken at Launceston, April 13, 1916.

Much smaller than *P. dissimulator*, Ckll., which it resembles in many respects. The male has a very strong superficial resemblance to *Halictus spenceri*, Ckll.

X.—*A new Shrew and Two new Foxes from Asia Minor and Palestine.* By OLDFIELD THOMAS.

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IN working out some mammals obtained by Major Maurice Portal during the Palestine campaign, and presented by him to the National Museum, I have found the three following forms to need special names:—

Crocidura portali, sp. n.

Most nearly allied to the Central Asiatic species *C. ilensis*; widely different from the European forms of the genus.

Size small, though not excessively so. General colour clear pale grey, rather paler than "drab-grey" if the darker tips to the hairs are included, but it may be better described as "pale drab-grey" overlaid with the fine brown hair-tips which slightly darken it. Under surface creamy white, the

hairs slaty at base, but the slaty quite hidden by the whitish tips, so that the colour is not a mixed slaty and white, as is more usual in shrews; line of demarcation on sides fairly well marked. Hands and feet white. Tail greyish white above, white below, with a fair number of the usual longer bristles.

Skull very like that of *C. ilensis* in its small size and short muzzle. Teeth about as in that species, the incisors less prominent than in *C. russula*.

Dimensions of the type (measured on skin) :—

Head and body 57 mm.; tail 35; hind foot 12·5; ear 9.

Skull: condylo-incisive length 17·5; basal length 15·5; greatest breadth 8·3; front of i^1 to back of m^3 7·8; front of p^4 to back of m^3 4·5; tip of i^1 to tip of p^4 4; back of i^1 to front of p^1 1·8; breadth of palate across m^2 5·6.

Hab. Ramleh, S.E. of Jaffa, Palestine.

Type. Adult skin and skull. B.M. no. 19. 4. 11. 9. Collected and presented by Major Maurice Portal.

This pretty little grey shrew has clearly nothing to do with the *C. russula* group, of which a local form—*C. r. judaica*—was described recently. *C. russula* has a much longer muzzle, with larger and more dominant incisors, while in the present form the incisors are comparatively small. *C. ilensis*, a species described by Miller from a specimen now in the British Museum, seems really its nearest ally, and of this, besides the type, we have a considerable series from Djarkent (*Rückbeil*) and Samarkand (*Carruthers*). These, however, all have shorter tails and are of a decidedly darker grey, not unlike that of European *C. russula*.

On the other hand, there have recently been received from Baluchistan, collected by Col. Ernest Hotson, four shrews very similar in proportions to *C. portali*, and, while rather variable in colour, averaging much lighter than *C. ilensis*, one of them, in fact, being of precisely the same pale grey as the type of *C. portali*. These specimens perhaps indicate that this pale shrew will be found to extend right across Persia, but until that country is better explored, this cannot be definitely asserted.

Of older known species none seems to enter into question, as they are mostly larger—at least as large as *C. russula*,—the only doubtful one being *Sorex gmelini*, Pallas, from “Hyrcania,” the country on the S.E. coast of the Caspian Sea. It, however, would seem to be more strongly drabby, *i. e.* as in *russula* and *ilensis*, while its generally insufficient

description has already induced Dr. Saturnin to say that it should be put aside as indeterminable.

No shrew like this is known from Egypt, *C. olivieri* being twice as large, while *C. religiosa* is far smaller and belongs to a wholly different group.

Vulpes vulpes anatolica, subsp. n.

Darker and duller coloured than other foxes of S.E. Asia, the upper surface a more or less muddy reddish brown. Central line of nape and withers washed with blackish. Middle of back (saddle) dull cinnamon-rufous, the usual whitish subterminal rings on the hairs only appearing on the rump. Under surface washed with dull whitish, the hairs broadly slaty basally, the chin and throat blackish slaty. Back of ears deep black. Pale shoulder-patches dull buffy, not conspicuous. Fore legs deep fulvous or blackish, feet fulvous with greyish metacarpal patch. Hind legs dull smoky fulvous, a line down inner side whitish; feet paler fulvous on top, with a darker patch on metatarsus, inner sides buffy whitish. Upper surface of tail dull rufous (nearest to "orange-cinnamon"); under surface pale buffy, with the hairs of the subterminal part washed with black; the extreme end dull white, not forming a conspicuous white tassel.

Dimensions of the type (measured on skin):—

Head and body 650 mm.; tail 335; hind foot 132.

Skull: greatest length 138; condylo-basal length 126; zygomatic breadth 71; nasals 49; interorbital breadth 25; breadth across postorbital processes 31; breadth of brain-case 45.5; height of brain-case from between bullæ 38.5; palatal length 69; length of p^4 on outer edge 12.6; combined length of m^1 and m^2 14; breadth of m^1 11.2.

A male skull, older than the type, measures 134 mm. in condylo-basal length.

Hab. Asia Minor. Type from Smyrna, a second specimen from Marash.

Type. Young adult female (fully developed, but the basilar suture not closed). B.M. no. 6. 10. 16. 2. Original number 57. Collected and presented by W. Griffitt Blackler, Esq.

This is a dull-coloured fox, markedly different in general tone from the light-coloured foxes, more or less of a desert type, found to the east and south of its habitat.

It was first obtained by Mr. C. G. Danford, who brought from Marash the skin referred to in P. Z. S. 1880, p. 53. That skin, however, had no skull, and I have therefore taken as type the specimen from Smyrna presented by Mr. Blackler.

Vulpes vulpes palæstina, subsp. n.

A greyish fox, much greyer than the rufous foxes of Egypt.

The body broadly greyish along the sides, the grey even in some cases extending on the back to the nearly complete suppression of the rufous. Under surface variable, buffy or whitish, with blackish bases to the hairs. Backs of ears deep black. Sides of neck, shoulders, and hips all greyish, the hairs with whitish subterminal rings. Fore legs greyish rufous, varying to fulvous, feet pale fulvous. Hind legs also smoky greyish, the upper surface of the feet buffy, rarely fulvous, their inner sides paler. Tail above buffy washed with blackish, the tip prominently white.

Skull rather smaller than in *V. v. anatolica*, about as in *ægyptiaca*.

Dimensions of the type (measured on the skin) :—

Head and body 610 mm. ; tail 330 ; hind foot 123.

Skull : greatest length 125·5 ; condylo-basal length 123 ; zygomatic breadth 66·3 ; nasals 43·5 ; interorbital breadth 23·2 ; breadth across postorbital processes 31 ; breadth of brain-case 44·5 ; height of brain-case from between bullæ 38 ; palatal length 62 ; length of p^1 on outer edge 12·2 ; combined length of m^1 and m^2 13·5 ; breadth of m^1 11·4.

Hab. Palestine. Type from Ramleh, near Jaffa. Other specimens from Mt. Lebanon.

Type. Adult female. B.M. no. 19. 4. 11. 8. Collected November 1918, and presented by Major Maurice Portal.

The Palestine fox, although it no doubt grades southwards into that of Egypt (*V. v. ægyptiaca*, Somnini), is on the average so very much greyer, especially on the sides and limbs, that it should apparently have a special subspecific name. Besides the specimen from Ramleh sent home by Major Portal, the Museum possesses three others from Mt. Lebanon, presented in 1894 by Mr. Saleem Barooly.

XI.—*Descriptions of Two new Frogs from Brazil.*

By G. A. BOULENGER, F.R.S., F.Z.S.

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THE frogs here described form part of a collection made by Prof. J. P. Hill, F.R.S., at or near Theresopolis during the Percy Sladen Expedition to Brazil in 1913, and the types have been presented to the British Museum by the Trustees of the Percy Sladen Fund.